

PATENT ABSTRACTS OF JAPAN

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(21)Application number : 02-083601 (71)Applicant : MAZDA MOTOR CORP

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(54) MANUFACTURE OF THICK PIEZOELECTRIC FILM

(57)Abstract:

PURPOSE: To easily manufacture a thick piezoelectric film having high sintering density by adding metal alkoxide of precursor of a piezoelectric system to paste containing fine piezoelectric powder before or after a step of screen printing the paste on a board.

CONSTITUTION: A pastelike thick film is formed of fine ceramic powder made of piezoelectric paste of mixture of lead titanate.zirconate as fine piezoelectric powder, metal alkoxide solution of its precursor, lead borosilicate glass fine powder as inorganic binder, ethylcellulose derivative as organic binder, and α -terpineol as organic solvent on an alumina board by a screen printing method, then the thick film is dried, further baked to form a piezoelectric thick film. Since the thick film having high sintering density can be formed by using the printing method, electric characteristics are improved without loss of the advantages of the printing, and even if electrodes are arranged on both upper and lower surfaces of the thick film, there is no fear of generating a short-circuiting state.

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